



UNITED STATES PATENT AND TRADEMARK OFFICE

UNITED STATES DEPARTMENT OF COMMERCE
United States Patent and Trademark Office
Address: COMMISSIONER FOR PATENTS
P.O. Box 1450
Alexandria, Virginia 22313-1450
www.uspto.gov

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/918,158	07/30/2001	Robert A. DiChiara JR.	7784-000146	2919
27572	7590	01/18/2005	EXAMINER	
HARNESS, DICKEY & PIERCE, P.L.C. P.O. BOX 828 BLOOMFIELD HILLS, MI 48303				HOFFMANN, JOHN M
		ART UNIT		PAPER NUMBER
		1731		

DATE MAILED: 01/18/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary	Application No.	Applicant(s)	
	09/918,158	DICHIARA, ROBERT A. <i>(L)</i>	
	Examiner	Art Unit	
	John Hoffmann	1731	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --
Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1) Responsive to communication(s) filed on 12- 15- 05.

2a) This action is FINAL. 2b) This action is non-final.

3) Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4) Claim(s) 1-7 and 23 is/are pending in the application.

4a) Of the above claim(s) _____ is/are withdrawn from consideration.

5) Claim(s) _____ is/are allowed.

6) Claim(s) 1-7 and 23 is/are rejected.

7) Claim(s) _____ is/are objected to.

8) Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9) The specification is objected to by the Examiner.

10) The drawing(s) filed on _____ is/are: a) accepted or b) objected to by the Examiner.
 Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
 Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11) The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

12) Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

a) All b) Some * c) None of:

1. Certified copies of the priority documents have been received.

2. Certified copies of the priority documents have been received in Application No. _____.

3. Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892)	4) <input type="checkbox"/> Interview Summary (PTO-413)
2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948)	Paper No(s)/Mail Date. _____.
3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08) Paper No(s)/Mail Date _____.	5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152)
	6) <input type="checkbox"/> Other: _____.

DETAILED ACTION

Continued Examination Under 37 CFR 1.114

A request for continued examination under 37 CFR 1.114, including the fee set forth in 37 CFR 1.17(e), was filed in this application after final rejection. Since this application is eligible for continued examination under 37 CFR 1.114, and the fee set forth in 37 CFR 1.17(e) has been timely paid, the finality of the previous Office action has been withdrawn pursuant to 37 CFR 1.114. Applicant's submission filed on 15 December 2004 has been entered.

Claim Rejections - 35 USC § 112

The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

Claims 1-7 and 23 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

Claim 1 has a step of mixing. This is not understood because the claim is directed to a composition – not a method. It is unclear if the step is an intended use of the final mixture, or what.

The term “metal oxide” is indefinite as to its meaning. Claim 2 suggests that silica can be a “metal oxide”. However, silicon is not a metal. Whereas it seems that applicant is setting forth that the term metal oxide includes silicon dioxide, such is improper because there is no indication as to what else is or is not included. The

Art Unit: 1731

specification does not clearly set forth an explicit definition, thus Applicant is not acting as lexicographer. Johnson Worldwide Assocs., Inc. v. Zebco Corp., 175 F3d 985, 989 (Fed. Cir.1999). In other words, if Applicant intended to redefine the term "metal" or "metal oxide" so that the invention would include silica, application would have had to have clearly set forth an explicit definition – AT THE TIME OF FILING.

Claims 3: there is no antecedent basis for "the ceramic". The claims are directed to a mixture that can be used to make (any) ceramic – but the claims are not directed to a ceramic.

Claim 23 – it is unclear if the metal oxide of claim 23 further defines the oxide content of claim 1 – or if it is an additional content.

DETAILED ACTION

Claim Rejections - 35 USC § 102

The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

Claims 1-4 and 23 are rejected under 35 U.S.C. 102(b) as being anticipated by

Kalinowski 5129919

The mixture of col. 7, lines 51-68 reads on the claimed mixture.

The PTO gives a disputed claim term its broadest reasonable interpretation during patent prosecution. Hyatt, 211 F.3d at 1372. The “broadest reasonable interpretation” rule recognizes that “before a patent is granted the claims are readily amended as part of the examination process.” Burlington Indus. v. Quigg, 822 F.2d 1581, 1583 (Fed. Cir. 1987). Thus, a patent applicant has the opportunity and responsibility to remove any ambiguity in claim term meaning by amending the application. In re Prater, 415 F.2d 1393, 1404-05 (CCPA 1969). Additionally, the broadest reasonable interpretation rule “serves the public interest by reducing the possibility that claims, finally allowed, will be given broader scope than is justified.” In re Am. Acad. of Sci. Tech. Ctr., 367 F.3d 1359, 1364 (Fed. Cir. 2004) (quoting In re Yamamoto, 740 F.2d 1569, 1571-72 (Fed. Cir. 1984)).

The courts have been holding for quite some time that “—in spite of the fact that a product-by-process claim may recite only process limitations, it is the product which is covered by the claim and not the recited process steps.” (In re Hughes, 182 USPQ). Also, “—patentability of a claim to a product does not rest merely on a difference in the method by which that product is made. Rather, it is the product itself which must be new and unobvious.” (In re Pilkington, 162 USPQ 147).

The Patent Office bears a lesser burden of proof in making out a case of *prima facie* obviousness for product-by-process claims because of their peculiar nature. In re Fessmann, 489 F.2d 742,744, 180 USPQ 324, 326 (CCPA 1974). Once the examiner provides a rationale tending to show that the claimed product appears to be the same or similar to that of the prior art, although produced by a different process, the burden shifts to applicant to come forward with evidence establishing an unobvious difference between the claimed product and the prior art product. In re Marosi, 710 F.2d 798, 802, 218 USPQ 289, 292 (Fed. Cir. 1983).

The above cited case law is relevant as follows: One looking (only) at the Kalinowski mixture (which has 61% solids) cannot determine how the mixture was created. It could be created by the specific method of Kalinowski. Or it could be made

Art Unit: 1731

by mixing a 50-50 batch of alumina powder with a sol gel of 22% alumina solids. In other words the methodology in the claims is nearly irrelevant – only compositional properties that would necessarily result from the methodology would be relevant. Presently, the Office sees nothing in the claim that would inherently define over the Kalinowski mixture.

Alternatively, the literal meaning of the claim is that the ceramic matrix comprises the sol gel.... The claim merely states that the mixture is “for forming a ceramic matrix comprising : a sol gel...” In other words, the sol gel/alumina merely modify what matrix the mixture can be used for. It does not limit the composition of the mixture. For example, a common brick can used “for forming a ceramic matrix comprising: a sol gel...” because a brick can be used in a building which protects the ceramic matrix making process. The claim does not require that the mixture be an ingredient of the matrix, rather it must merely be capable of being used in some way in a forming process. This is not to be interpreted of saying it would have been obvious to do so; the claims do not require such. Rather, the claims only require what is possible. Presently, the Kalinowski product could be used to form the matrix – because it could be used to quench the matrix, to mold the matrix or in some other nominal manner.

A recitation of the intended use of the claimed invention must result in a structural difference between the claimed invention and the prior art in order to patentably distinguish the claimed invention from the prior art. If the prior art structure is capable of performing the intended use, then it meets the claim. In a claim drawn to a process of making, the intended use must result in a manipulative difference as compared to the prior art. See *In re Casey*, 152 USPQ 235 (CCPA 1967) and *In re Otto*, 136 USPQ 458, 459 (CCPA 1963).

Claim 2 is clearly met.

Claims 3-4 refer to "the silica sol". There is no requirement that there actually be a silica sol. Thus the claims are interpreted as "if there is a silica sol, then the mixture comprises 0-33% of the silica sol" (or 5-10%). It is noted that if one was to use "the silica sol" the mixture should have 100% of the sol.

Claim 5 merely requires a there be a size – there is no requirement of an average size or the like.

Claims 6-7: see col. 3,lines 41-45.

Claim 23: This claim does not significantly limit the final product. The claims are comprising in nature and are open to having other ingredients used in the mixture. For example, a mixture formed with 0.01% of a sol (with 20 wt% alumina), 49.99% of a sol with some other solid content, and 50.00% of alumina powder, would read on the claimed invention. Thus, the claim does not define over Kalinowski because using a sol of 20% metal oxide does not impart any feature into the final product, because it does not impart any extra ingredients in the final product, exclude any ingredient in the final product, nor limits the quantity of any ingredient.

Claims 1 and 5 are rejected under 35 U.S.C. 102(b) as being anticipated by Carman 5160509.

See EXAMPLE I of Carman. Note the above discussions as to the breadth of the present claims. As to claim 5: see col. 5, lines 33-34 of Carman which disclose sub-micron sized alumina. This is very similar to applicants 0.1-1.5 micron range.

Response to Arguments

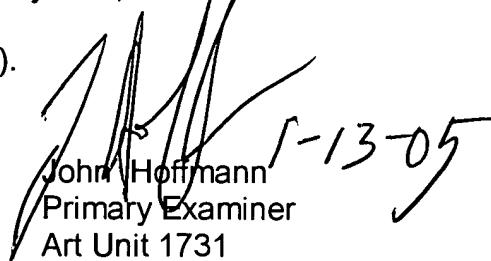
Applicant's arguments have been considered but are moot in view of the new ground(s) of rejection.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to John Hoffmann whose telephone number is (571) 272 1191. The examiner can normally be reached on Monday through Friday, 7:00- 3:30.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Steve Griffin can be reached on 571-272-1189. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Art Unit: 1731

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).


John Hoffmann
Primary Examiner
Art Unit 1731

jmh